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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DAY, MICHAEL HENRY

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 10/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/086,555

Applicant(s)

R. Kanwal

Examiner

Michael Day

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 12-23 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some\* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 5
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_

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### DETAILED ACTION

1. Preliminary amendment, filed 03/04/2002, has been entered, and the formal drawings, filed 05/09/2002 have been received.

### *Claim Objections*

- ✓ 2. Claim 15 is objected to because of the following informalities: The subject claim should end with a period. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. Claims 12, 18-23 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Sandhu et al. Sandhu et al. disclose a field emission display as claimed. See FIG. 3, and respective portions of the specification.

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Referring to claim 12, Sandhu et al. disclose a field emission display including an emitter 48 formed of a doped silicon (see col. 2, lines 19-23), a substrate 60 having a phosphor coating 62, said emitter having a current emission surface (layer 56) that has been treated with a plasma enhanced CVD hydrogenation process (see col. 2, lines 39-55) followed by a nitrogen infusion process (see col. 3, lines 8-11).

Referring to claim 18, Sandhu et al. disclose a field emission display of claim 12 further including an insulative layer 50.

Referring to claim 19, Sandhu et al. disclose a field emission display of claim 18 wherein said insulative layer 50 includes silicon dioxide (see col. 2, lines 23-27, borophosphosilicate).

Referring to claim 20, Sandhu et al. disclose a field emission display of claim 18 further including a silicon grid (see col. 2, lines 27-29, layer 52) on said insulative layer 50.

Referring to claim 21, Sandhu et al. disclose a field emission display of claim 20 further including a metal layer (see col. 2, lines 64-66, layer 56).

Referring to claims 22, and 23, Sandhu et al. disclose a field emission display further including a passivation layer including a nitride (see col. 3, lines 8-11).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 13-17 are rejected under 35 U.S.C. 103(a) as being obvious over Sandhu et al. in view of Kanicki.

Referring to claims 13-15, Sandhu et al. disclose a field emission display of claim 12 further including a base substrate (glass plate 44). Sandhu et al. do not disclose a field emission display wherein the base substrate includes a barrier film. Kanicki teaches that a barrier film (see page 119) on a glass substrate improves chemical durability. It would have been obvious to include a barrier film, as disclosed by Kanicki, on the glass plate, as disclosed by Kanicki, to improve chemical durability.

Referring to claim 16, Sandhu et al. disclose a field emission display further including a conductive layer 46.

Referring to claim 17, Sandhu et al. disclose a field emission display wherein said conductive layer 46 is metal. Sandhu et al. are silent as to which metal, however, the selection of a known material for a known purpose is within the skill of the art.

### *Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. patent No. 5,319,279 by Watanabe et al. disclose an electrode 11 made of aluminum at col. 9, lines 17-24.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Day whose telephone number is 703/305-4941. The examiner can normally be reached on Monday-Friday, from 8:00 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel, can be reached by phoning 703/305-4794. The Fax phone number is 703/308-7382.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is 703/308-0956.

October 28, 2002



**MICHAEL DAY**  
**PRIMARY EXAMINER**  
**GROUP 2870**